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Via email, October 10, 2003

To: FCC: David Furth, Kathleen Ham, Richard Arsenault, Paul D'Ari, Julie Knapp.
Via ECFS, to other parties filing in the below-referenced docket.

Re: RM-10403 (902-928 MHz)

Mr. Furth, Ms. Ham, Mr. Arsenault, Mr. D'Ari, and Mr. Knapp,

On February 3, 2003, I sent you an email regarding the above-referenced docket. Since then, certain parties involved with use of the subject 902-928 MHz band on a Part 15 basis ("Part 15 Entities") have submitted filings regarding this docket on ECFS. This responds to these filings as well as supplements my past filings. These recent Part 15 Entity filings mirror past filings by these and other Part 15 Entities in this docket.

My filing on 2-3-03 and my preceding filing on 12-10-03 presented a balanced approach that would allow Progeny to seek relief it sought for its LMS licenses outside a rulemaking which these Part 15 Entities oppose and which no other LMS licensee supports at this time. This would allow me and my company to proceed with our plans free from what is likely to be substantial hindrance by a rulemaking and the adversarial (and in large part artificial) contest it will create before the Commission, as discussed in these two earlier filings.

This approach, as described, was based on appropriate consideration of an effective plan for LMS consistent with sound Commission goals for LMS¹ (further noted below), the concerns of the Part 15 Entities, input received from FCC staff including OET, the FCC Spectrum Policy Task Force report of last November, interest from the marketplace including potential public and private end users of wide-area LMS networks, and current and emerging technology which may be employed to best meet these considerations.

¹ While I believe some rule waivers or the like will be warranted in certain cases, these goals were and remain sound. Neither Progeny nor the Part 15 Entities deal with these goals in this docket, as far as I can recall, including use of the band for ITS functions, and cooperative efforts to coordinate LMS and Part 15 technology and operations to reduce interference and maximize use of the band. From the start, my company commenced this effort including via a major joint technical study with Metricom before it filed bankruptcy, by participation in the ITS community, and in other demonstrable ways. As noted herein, we are continuing pursuit of these goals.

The Part 15 Entities who have filed in this docket uniformly oppose any change in the rules. They generally base that on their position that they already make substantial use of the band and they fear that changes sought by Progeny would allow for increase in use of the band by licensed LMS operations which they believe would adversely affect their operations.² We believe these concerns are overstated, but that is common in such adversarial contests before the FCC or other authorities.

As indicated in my two previous filings, noted above (and numerous other filings in this and other FCC dockets),³ my company's plans for LMS are intended to comply with and advance existing LMS goals and rules with regard to joint-use of this band with Part 15 Entities and providing unique highway-based service to advance ITS and compatible applications.⁴ We are working on development of appropriate technology and equipment (and other development) for LMS under current FCC rules and policies for this band.

² This position before the FCC is undercut by public financial filings of a number of such Part 15 entities where they do not disclose any such fears. A company cannot, for its existing and potential investors, fail to disclose material adverse risks concerning use of this radio spectrum, and yet before the FCC take a position that they are indeed subject to such risks. The fundamental risk from licensed LMS has nothing to do with the Progeny rulemaking proposal, but is established in the current FCC rules (Part 90 LMS rules, Part 15 rules) and the fact that the FCC licensed LMS throughout the nation.

³ Including ET 02-135, WT 00-32, PR 92-257 and others.

⁴ The planned vehicular-installed, highway-based LMS service using current and emerging technology will be unique and is needed for such ITS and related applications. When wireless service commenced decades ago and for a long time, vehicular installed radios and system architecture providing coverage for such radios ("Vehicular Service") was predominant or common and portable radios were rare. Now, almost all wide-area wireless (and all WLAN wireless) is based on small portables. We believe, including based on our proprietary studies and developments, that LMS can succeed by use of modern techniques to optimize Vehicular Service. This will also allow for spatial division for interference minimization between LMS system and end-user radios (respectively, on high HAAT antenna locations and mounted on vehicles, sometimes with "intelligent" antenna configurations) and Part 15 base transmitters and end-user radios (each using low-height antennas and either inside buildings or in a short range outside of them normally away from major highways and large parking lots where the LMS radios would be operating). This spatial-division means to minimize interference would be enhanced by other techniques, including to detect and avoid or mitigate co-channel and adjacent-channels signals, whether from Part 15 devices or from the LMS system devices. In addition, the LMS communication functions (in addition to multilateration) would be IP packet-data based, providing various QoS services each tolerant of substantial interference by Part 15 devices.

The goal of such joint use, including among licensed and unlicensed operations, should become increasingly important in a broad range of FCC radio services, as reflected in the Spectrum Policy Task Force report last November. The techniques needed are valuable not only for such joint-use but also for spectrum efficiency and other advances.⁵ As this Task Force report noted, the commonly asserted scarcity of spectrum is more a function of wasteful un-intelligent techniques than actual congestion of radio spectrum (even the busiest bands do not involve use of most of the spectrum most of time in any particular area).

The LMS band could and should be a band in which substantial progress is made in this regard, both for its own benefit, and as test bed for broader applications. The current rules and Commission goals for this band call for such progress. The Commission goals for vehicular-based LMS applications including for ITS are even more important now than when the LMS rules were adopted and should also be supported and pursued.⁶

For reasons given above, my company and I oppose commencement of rulemaking for LMS at this time. It will likely hinder or derail the progress we are making with no counterbalancing benefit. The only possible benefit of rulemaking is whatever benefits Progeny may assert, but Progeny cannot assert these for other LMS licensees or for the entire LMS service,⁷ and it is entirely free to seek these via rule waivers and other relief specific to its own licenses, due diligence, and plans.

⁵ While first-generation “multilateration” equipment was installed and used by Teletrac years ago, this failed in the marketplace and was been discontinued and Teletrac filed bankruptcy, and in any case, this equipment did not satisfy such goals of joint use and intelligent efficient use of spectrum even for the threshold “multilateration” function, and it provided only a nominal and non-competitive communication function (only slow-speed status messaging). Thus, it is not appropriate to attempt to revive and use this failed first-generation equipment for current and future LMS multilateration operations.

⁶ In addition, the Commission has expressed its interest in support of shared networks, including on VPN basis, between private licensees and their users on the one hand, and on the other public safety entities and critical infrastructure entities. (E.g., see Commission statements in WT 00-32, cited in my company’s filing in this docket, and our discussion on this matter in that filing with respect to our “ATLIS” proposal involving LMS licenses.) The LMS band, with appropriate technology and systems focused on the goals noted above could be especially effective for this purpose. This does not require a rulemaking. Some of the critical-infrastructure entities that could be involved include those using the 902-928 MHz band for Part 15 based meter reading and the like. Again, our goal is intelligent cooperation, for which a contentious rulemaking is likely to disserve.

⁷ Especially when its filings in this docket do not squarely address LMS-specific requirements and goals, including “multilateration” and ITS applications, and do not clearly indicate what type of service it seeks to pursue via the rules changes it proposes.

Sincerely,

Warren Havens
Individually, and as President of
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